Making hospitals safe for patients and nursing / midwifery staff

Safe staffing levels and skills mix in South Australian Public Hospitals – options for the future

September 2012
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For the past twenty years between 12 and 14 of the largest public hospitals in South Australia (SA) have used ExcelCare, an electronic clinical nursing and midwifery care planning system incorporating a staffing resource tool. One of the key functions of ExcelCare is the ability to project nurse/midwife staffing demand for the current or future shifts. ExcelCare and ProAct (Nurse/Midwifery Rostering Information System) are interfaced to enable nursing/midwifery managers to forecast staffing requirements and retrospectively calculate nursing and midwifery resources (Nursing/Midwifery Hours Per Patient Day (N/MHPPD)).

The requirement to use ExcelCare for staffing is embedded in the 2010 (and earlier) Nurses and Midwives (South Australian Public Sector) Enterprise Agreement (2010 EA). SA Health, as part of its reform agenda, is implementing a new system called the ‘Enterprise Patient Administration System’ (EPAS) that will provide the foundation for delivering a state-wide electronic health record (EHR) within South Australia. As a consequence, as EPAS is introduced it is expected that ExcelCare will cease to be used.

For smaller country hospital inpatient wards, the Country Staffing Methodology was reviewed and updated as part of the settlement of the 2010 EA. However, this staffing methodology is not dynamic and, therefore, is not able to be adjusted to meet changing patient care and acuity needs. At the time of concluding the 2010 EA, it was hoped that CPS (the Nursing/Midwifery Clinical Information System selected to replace ExcelCare) would become available to all country sites which would have enabled use of a consistent, standards based methodology across the public hospital system. However, the subsequent decision not to proceed with implementation and to proceed with EPAS in lieu of both nursing/midwifery systems, means this will now not occur.

Any new system must therefore contemplate application to all inpatient areas within both country and metropolitan hospitals. EPAS has the capacity to plan and record clinical care—but it does not contain a staffing resource tool. Therefore, an alternative staffing methodology needs to be developed and agreed by ANMF (SA Branch) and SA Health to ensure quality patient care for all inpatient wards in SA into the future.

It is acknowledged that even this approach leaves significant gaps in the goal to have safe staffing systems in place across the care continuum. We continue to work with SA Health to trial tools in the general community health and community mental health sectors and to explore means by which Outpatients Department services can better staff their services.

However, this paper largely focuses on maintaining regulation of areas already making use of staffing tools of one sort or another and which would become unregulated without positive action. Failure to act in respect of these areas would place the safety and quality of patient care and the safety of nurses and midwives at risk. This scenario would be totally unacceptable to ANMF (SA Branch) and its members.

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Problems and benefits of the current system

Most nurses and midwives using ExcelCare will be able to provide a list of problems that they experience in using the system! SA is still using a long outdated (DOS version) of the system which does not allow many of the features associated with modern IT systems. It also is unable to be integrated with many other health IT systems as a consequence of its outdated programming.

ExcelCare captures a wide range of patient and individual ward information, including current and changed patient care needs, new interventions (which require new timings), use of technologies, ward geography, DDAs, emergency trolley checks and clinical handover. This consumes a lot of time to ensure accurate, valid and reliable data that informs the clinical and nursing/midwifery staffing requirements.

However, there are also many positives that we have gained from the use of the system:

1. ExcelCare ‘clinical content’ is underpinned by evidenced-based standards developed by professional experts. The ExcelCare timings methodology has a valid statistical basis and is governed by local hospital committees which have oversight of the clinical information system. ExcelCare Care plans are subject to review and audit.

2. ExcelCare is a legal record of care delivered. It is well established as a part of the required documentation of care required and delivered in those sites where Excelcare is used. Timings for interventions and units of care are built from direct observation and recording of the time it takes a sample of nurses/midwives to undertake that work in their clinical setting. An agreed statistical framework means that the way in which timings occur is systematic, consistent and transparent even though timings can vary between clinical areas for the same interventions.

3. The current staffing methodologies using ExcelCare as the tool are enforceable using the 2010 Enterprise Agreement as the basis for any enforcement action.

Staffing levels in SA public hospitals using ExcelCare have grown over the last 10 years reflecting the growth in the acuity, complexity and care needs of the patient population because they are not ‘fixed’ to the number of beds or patients but are linked to the actual care being delivered on the day – and even to a specific shift.

Recent reports have demonstrated that the staffing outcomes in SA hospitals using ExcelCare are higher than they would be in most clinical areas under alternative methodologies presently in use in Australia.

This means that we must be extremely careful when discussing any new methodology to ensure it does not provide for lower staffing levels than are currently in place and that it is able to adapt as care requirements change, ie. ensure that any new system is demand driven.

What does the evidence tell us about these issues?

There have been a number of studies undertaken using meta-analyses, literature and systematic reviews in the United Kingdom, United States of America, New Zealand and Australia related to nursing/midwifery staffing levels, skill mix and patient outcomes in the acute care setting. The systematic reviews have shown the strong and consistent relationship between nurse/midwife staffing and specific adverse events. Evidence shows that lower staffing results in higher rates of patient falls, medication errors, decubitus ulcers and longer lengths of stay.

A growing body of research shows the relationship between nursing/midwifery workload and working environment, including the type and quality of equipment, the level of experience of the nurse/midwife, competency and education levels, model of care and the ability to communicate amongst team members.

There is a growing concern regarding the relationship between nurse/midwifery staffing levels and the nursing/midwifery interventions that are being ‘left undone’ (eg. missed care such as medications not administered on time, inability to ensure appropriate intake of fluids and food) and the impact on patient outcomes.

In summary, the literature and research undertaken in several countries shows that having fewer patients per nurse/midwife or more direct nursing/midwifery care hours per patient day and a richer skills mix (more RN/Ms) is associated with improved patient outcomes, in particular, less hospital mortality and fewer adverse events including failure to rescue, cardiac arrests and hospital-acquired pneumonia amongst others.

Recent Australian research linking staffing, workloads, skill mix, and patient outcomes

The New South Wales (NSW) Government commissioned research to inform future public policy development and nursing/midwifery workforce issues. This involved a study of 27 hospitals and 286 inpatient medical/surgical wards.

The study examined the linkages between nurse/midwifery staffing, nursing/midwifery workload (inpatient acuity, shorter length of stay, patient turnover and case mix), skill mix, the working environment and their relationship to patient outcomes.

Findings included:

- Patient turnover contributes to an unstable work environment and increased transfers of care between nurses/midwives with an increased possibility of communication gaps leading to adverse events.
• Where nurses/midwives perceived the environment to be unsafe, where the resources in the form of leadership and ancillary staff were perceived to be lacking, where the proportion of Bachelor of Science in Nursing (BSN) prepared nurses was lower, care deteriorated. Interventions were left undone (especially the comforting / teaching interventions) and overtime levels increased.

• A skill mix with a higher proportion of Registered nurses produced statistically significant decreased rates of negative patient outcomes such as decubitus ulcers, gastrointestinal bleeding, sepsis, shock, physiologic/metabolic derangement, pulmonary failure, as well as, ‘failure to rescue’.

Estimates for improvements in a number of patient outcomes related to skill mix were found:

• Decreased rates of decubitus ulcers; an additional RN shift per patient day would reduce the incidence of decubitus ulcers by 20 per 1,000 patients;

• Decreased rates of pneumonia; an additional RN shift per patient day would reduce the incidence of pneumonia by 16 per 1,000 patients;

• Decreased rates of sepsis; an additional RN shift per patient day would reduce the incidence of sepsis by 8 per 1,000 patients.

• Only one estimate was found for a statistically significant increased incidence of a negative patient outcome related to skill mix; ie. increased rates of deep vein thrombosis. An additional RN shift per patient day would increase the incidence of DVT by 8 per 1,000 patients. (Duffield et al. 2007, p.16)

**United Kingdom Nursing/Midwifery Staffing Methodology**

In the United Kingdom a 2002 systematic review of methods for estimating the size and mix of nursing teams was commissioned by the United Kingdom Department of Health and provides a comprehensive review of workforce planning systems using the following theoretical approaches or systems:

- Professional judgement approach
- Nurses per occupied bed method
- Acuity-quality method
- Timed-task / activity method
- Regression-based systems

Application of these differing approaches have led to the development of a number of specific staffing tools or systems (please refer to the summary at Table 1 overleaf).

**How have others approached staffing issues?**

Internationally and nationally there are a variety of nursing and midwifery staffing models. The models that were seen to be closest to meeting the needs of SA were identified in the UK, New Zealand and in other parts of Australia.
<table>
<thead>
<tr>
<th>Model Type</th>
<th>Model Summary</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Judgement</td>
<td>Consensus method. Conversion of roster into FTE using a simple formulae + a percentage is added to cover leave/absence (22%) adjustment. Recommended to complement other staffing tools as part of a triangulated model.</td>
<td>Simple. Low cost. Quick. Applicable to a range of specialities.</td>
<td>Subjective. Not transparent. Not linked to quality measures/patient outcomes. Not enforceable.</td>
</tr>
<tr>
<td>Nursing Workforce Planning Tool (Hurst)</td>
<td>Hurst's tool using five workload planning methods: Professional Judgement; Nurses/ Patients per Occupied Beds (NPOB); Activity quality; Time/Task/activity and Regression Based Analysis. Gives flexible choice of methods to use and allows calculations to be triangulated and ‘what if’ scenarios to be undertaken.</td>
<td>Allows triangulation. Speciality specific excel worksheets already set up for use. Supported by a comprehensive website which provides information and e-learning resources to support the tools.</td>
<td>Model has not updated ‘timings’ studies since 2002 data collection. Timings undertaken exclusively in UK. Not enforceable.</td>
</tr>
<tr>
<td>Safer Nursing Care Tool NHS</td>
<td>Dependency data collected over five year period developed by University Hospitals involving ten sites. Used in acute adult inpatient services. Uses Hurst’s timings.</td>
<td>Acuity and Dependency to quality indicators. Monitoring of actual staffing levels on the quality and care delivered to monitoring of nurse sensitive indicators (NSIs). Used as a platform for other staffing methodologies. Acuity based system.</td>
<td>Has been superseded by other approaches. Not very transparent. Not enforceable.</td>
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<tr>
<td>GRASP including MiStroWorks Software and MiStroClef Software first launched 30 years ago</td>
<td>Workload-workforce demand tool which calculates staffing at a ward or service level. GRASP captures the professional components of work, as well as, daily interventions. MiStroClef software program incorporates capabilities of the GRASP methodology for easy use. MiStroWorks Software has two components:  • DataWorks – assesses workload based on patient mix.  • StaffWorks – staffing figures document. Required hours based on workload compared with staffing, to review how appropriate / effectively resources allocated. MistroClef is an updated (Web based) versions of GRASP software which allows staff to ‘quickly and accurately review delivery requirements, Times of nursing interventions measured to determine total care/ work required for each patient/area. Covers total care/work - direct and indirect care, process, teaching, support and unlisted/ unpredictable activities. It can also provide benchmarking data to support planning as a more strategic level. GRASP was successfully tested in the field in 1976 and has been implemented in 500 institutes worldwide, including in the USA.</td>
<td></td>
<td>Relies on the application of software. Not enforceable in current sites.</td>
</tr>
<tr>
<td>United Kingdom Staffing Plan Tools</td>
<td>Model Type</td>
<td>Model Summary</td>
<td>Advantages</td>
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<td>GOSHman PANDA – Paediatric Wards 2005 pilot</td>
<td>Discriminates between children needing normal dependency, high dependency or intensive care. It calculates nursing staffing requirements based on dependency/acuity of children. Informs skill mix reviews.</td>
<td>Uses a combination of professional judgement; data of NPOB, bed acuity and quality of health care. Meets the principles of triangulation (that is comparing 2+ methods to ensure validity and reliability of data). Enables staff restructuring in response to immediate needs. Supports information when bidding for extra resources. Supports skill mix and competency reviews. Satisfies the principle of triangulation.</td>
<td>None identified in the literature. Worth exploring for these service areas in addition to existing data.</td>
</tr>
<tr>
<td>QUEST Trigger questions Identifying indicators of staffing outcomes</td>
<td>QUEST uses Trigger Tools (TT). Provides an easy-to-use method for accurately identifying adverse harm events and measuring the rate over time.</td>
<td>Methodology: Retrospective review of a random sample of inpatient hospital records using ‘triggers’ to identify possible adverse events. It is important to note that this tool is not designed to identify every single adverse event in a record and is utilised as an additional source of intelligence to complement that from complaints, incidents, PALs and patient experience feedback. Links staffing to qualitative measures.</td>
<td>Retrospective. Dependent on triggers. Not designed to identify every single adverse event.</td>
</tr>
<tr>
<td>Birthrate Plus Maternity Services launched 2001</td>
<td>Workforce planning and strategic decision making tool for maternity services. Workload measurement tool that can be used to establish staffing required, based on pattern of activity experienced.</td>
<td>Allocates scores to mothers and babies depending on the normality of labour process (retrospective), includes five categories of clinical score. Covers all areas of maternity services (pre-natal, labour and delivery, post-natal). An extension to the package is the Birthrate Acuity System developed in 2007 that enables midwives to assess ‘real-time’ workload in the delivery suite specifically and can be used as a predictive system. Actively compiled data since 2006 and established massive dataset on dependencies and staffing in maternity which can be used to identify changes in workload and staffing profiles and influence National midwife: patient ratios. Can assist with skill mix calculations. Tool developed 15 years ago and has been adapted by NSW Health.</td>
<td>Used within NSW model as enforceable tool.</td>
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</table>
In 2005, the New Zealand Safe Staffing/Healthy Workplace Inquiry made recommendations which resulted in a national Multi Employer Collective Agreement (MECA) between the New Zealand Nurses Organisation (NZNO) and the District Health Boards (DHBs) with a shared commitment by both parties to work together to agree on:

- a mechanism for nurses, midwives and employers to respond immediately if workloads exceed the determined levels; and
- sustainable solutions to safe staffing issues, developed in a way that has the confidence of nurses and midwives.

Subsequently, the Safe Staffing/Healthy Workplace Committee (SSHWC) was established with representatives from NZNO and DHBs. The SSHW Unit led to the development of the New Zealand Care Capacity Demand Management (CCDM) Model for nursing/midwifery staffing.

**New Zealand CCDM Model Overview**

The New Zealand CCDM model's goal is to provide an optimal nursing/midwifery staffing model that matches nursing/midwifery levels, realigns staff resources and skill mix to deliver quality safe patient care. The term 'Care Capacity' is used to define the total resource required by the patient/client in order to achieve an acceptable outcome. The measure of capacity includes the staff, environmental factors, infrastructure and financial resources needed to produce the outcome.

The features of the NZ CCDM model include the ability to forecast and match staffing to patient demand based on historical data and predictions of nursing/midwifery care requirements. Like Hurst's model, the New Zealand CCDM model is evidence-based, has set validated time and motion data, captures patient acuity and utilises a nursing/midwifery clinical care planning information system with an algorithm nursing/midwifery workload calculation tool (TrendCare).

The NZ CCDM model is governed by a Local Data Council (Joint DHB and NZNO) established to monitor and evaluate the staffing model using a set of standardised metrics targeting twenty-four indicators (including nurse / midwife sensitive indicators) under the categories of:

- Patient Metrics: including care rationing, patient falls, pressure ulcers
- Staff Metrics: staff absenteeism, staff satisfaction, skill mix, overtime
- Productivity Metrics: Nursing Hours Per Patient Day, unplanned returns to operating rooms, transfers to ICU / HDU

Implementation of the NZ CCDM has required significant re-engineering of work flows and nursing/midwifery rosters, changing start and end times to optimise staffing resources and match demand.

However, this is still a very new initiative in New Zealand and has yet to be rolled out to all District Health Boards yet alone all hospitals or wards within those Boards. The outcomes from application of the tool are not enforceable. ANMF (SA Branch) was able to identify units where staffing levels were clearly below demand, yet the hospitals were unwilling to fund the required additional nursing/midwifery resources. The system is currently highly time intensive to implement, and relies on a significant investment by ward staff and managers. New Zealand is yet to undertake any new timings studies and therefore is using the TrendCare data base generic timings.
Each of the Australian models have been applied within the specific State Public Sector Enterprise Agreements which includes mechanisms for governance, monitoring and enforcement.

The three key nursing/midwifery staffing models applied in the hospital inpatient setting in Australia are:

A. Nurse/midwife to patient ratio (Victorian model)
B. Nursing / Midwifery Hours Per Patient Day (N/MHPPD) (Western Australian model)
C. Hybrid N/MHPPD (ratio, +/- workload index component) (NSW model)

plus a separate NSW Midwifery Model

A. Nurse/Midwife : Patient ratio model (Victoria)

In Victoria there is a mandated nurse/midwife to patient ratio of five nurses to twenty patients. The studies revealed that since the mandated nurse/midwife patient ratios were instigated in Victoria, nurses/midwives believed they were able to provide the quality of care patients needed. The ratio introduced in Victoria was one nurse / midwife to four patients during the day and one nurse / midwife to eight patients at night, with the ability to close wards if the ratios were not met. Subsequently, this ratio is now expressed as five nurses/midwives to twenty patients during the day and one nurse/midwife to eight patients at night. Nurses/midwives believe that if the nurse/midwife to patient ratios were not instigated in Victoria their ability to provide optimal care for patients would be compromised. Nurses/Midwives also indicated they would consider a change of profession or reduce their hours of work should the nurse/midwife to patient ratios be removed.

Interestingly, examination of actual staffing outcomes in a number of UK hospitals visited by SA Health and ANMF (SA Branch) showed that staffing outcomes were around the 1 Registered Nurse / Registered Midwife : 4 patients level, regardless of the tools being used.

B. N/MHPPD Model (Western Australia)

Ten years ago West Australian nurses/ midwives argued that they were unable to provide appropriate patient care due to inadequate staffing levels and resulting high workloads. As a consequence, a nursing / midwifery hours per patient day (N/MHPPD) staffing methodology was introduced in WA. The N/MHPPD was a different approach to nurse/midwife patient ratios, in that considerations such as patient complexity, intervention levels, the presence of high dependency beds, patient mix and patient turnover were the basis for the classification of hospital wards into one of the 7 categories.

The introduction of the WA N/MHPPD Staffing Model saw an increase of 3.47% in full-time equivalent (FTE) nurses (Department of Health 2005) in the acute sector, which in turn led to an increase in staff retention due to improved workloads and, it is believed, the ability to provide quality care.

The WA N/MHPPD was designed to address nursing/midwifery workload and this was supported by a retrospective study that found an association between implementing the N/MHPPD staffing method in WA public hospitals (and the associated increase in nursing/midwifery hours) and measurable improvements in patient safety. These improvements included:

- 9 nursing-sensitive patient outcome indicators,
- 7 reductions in the rate of mortality,
- 4 reductions in the rate of sepsis, and
- 2 reductions in pressure ulcers, pneumonia, ulcer/gastritis/upper gastrointestinal bleed rates, shock/cardiac arrest, and length of stay.

Tasmania and the Northern Territory have subsequently adopted the West Australian N/MHPPD Model which was last reviewed in 2007.
C. Hybrid Model (ratio, +/- workload index component) (NSW)

In New South Wales in 2010 the “Reasonable Workload Model” was replaced by the hybrid staffing model known as the “General Workload Calculation Tool” (GWCT).

This model takes into account workload assessment (measured demand based on clinical assessment: acuity, skill mix, specialisation where relevant, geographical and other local requirements/resources).

The NSW tool is comprised of a number of elements including:

- General nursing weight of 1 = 4.8 NHPPD (there are suggested ratio based models linked to this NHPPD that are able to be applied in various settings),
- Average Nursing Intensity – applying Australian Refined – Diagnosis Related Groups (AR-DRGs) case mix data for all patients,
- Occupancy Rates - average annual occupancy rates,
- Available beds,
- Length of shifts,
- Minimum staffing levels: use of the general workload calculation tool does not displace present minimum staffing requirements to ensure safe systems of work and patient safety, and
- Coverage: The general workload calculation tool is applied to calculate staffing levels for those nursing staff providing direct clinical care. It is not applied to positions such as Nurse/ Midwifery Unit Manager, Clinical Nurse Educator/Clinical Midwife Educator, Clinical Nurse Consultant/ Clinical Midwife Consultant, dedicated administrative support staff and ward persons.

The system also includes sufficient resources to allow for Annual Leave, Sick Leave, Family Leave and mandatory education.

Like South Australia, NSW has a staffing decision-making tree that enables the Nurse Unit Manager (NUM) to review staffing levels and negotiate for the provision of additional nursing hours to meet clinical needs. Additional staffing is identified by deployment of nurses from other wards/units, additional hours for part-time staff, the engagement of casual/agency nursing staffing and overtime. Where that is not possible, there is prioritisation of nursing activities on the ward/unit and/or reallocation of patients.

If these actions do not resolve the staffing issue then, with the approval of the Director of Nursing and Midwifery and the concurrence of the General Manager, there is a determination to reduce ward admissions.

NSW Midwifery Model

NSW Birthrate Plus is a framework for workforce planning and strategic decision making in maternity services and has been used extensively in the United Kingdom. The NSW Birthrate Plus Model is used to determine the case mix for this model. Clinical scores are allocated retrospectively to mothers and babies depending on the normality of the labour process and the outcome of the labour. Birthrate Plus has been developed and adapted in collaboration with the United Kingdom Calculation Tool © to apply to the needs of women birthing within NSW. This tool allows an assessment of the minimum midwifery staffing levels needed for maternity services including Antenatal Clinics, Antenatal and Postnatal Wards / Units, Delivery and Birthing Suites, Domiciliary Midwifery Services.

The NSW Birthrate Plus model is still progressing with ongoing consultation. NSW Health and the NSW Nurses’ Association (NSWNA) are undertaking a project designed to test the data collection tool for validity and reliability in NSW settings and the maternity model of care. The anticipated outcome is the adaption and adjustment of the workforce calculation which could lead to state-wide implementation.
Alternative Nursing / Midwifery Staffing Model for SA Public Sector Inpatient Wards

The large body of national and international literature and research shows that there is no definitive model, formula, single tool or ‘off the shelf’ package that can provide a reliable safe staffing model that ensures optimal patient and staff outcomes.

As a result, consideration must be given to the development of a robust SA Nursing / Midwifery Staffing Model to ensure safe patient care and a safe environment for nurses and midwives, that is:

- underpinned by evidence;
- represents best practice;
- allows for triangulation of decision making;
- is demand driven;
- can be adjusted into the future to maintain its relevance and integrity over time;
- has transparency; and critically
- is enforceable.

SA has a rich repository of evidence to support a dynamic nursing / midwifery staffing model that can be adapted to meet current and future changes in areas including nursing and midwifery practice, technology and models of care for all inpatient wards (excluding wards/areas with agreed staffing levels based staffing methodologies, i.e. Operating Theatres, Emergency Departments etc.)

The proposed conceptual model ‘SA Quality Safe Patient Care Staffing Model’ has the following key characteristics:

- **Metrics**: N/MHPPD that captures the direct patient care requirements representing patient demand, patient acuity. This would also include consideration of skill mix.

- **Environmental factors** (including environmental complexities, patient turnover and technology)

- **Professional Judgement Tool** - what standard of care, level, frequency, quality, metrics and how the ward/unit can best utilise the staff made available from the application of the metrics tools.

The model must be transparent in design and adjustable to meet changes in patient types, patient demands, nursing/ midwifery staffing and environmental factors.

The diagram below describes the key features of the possible ‘SA Nursing/ Midwifery Safe Staffing Model’.

### How could this model work?

The first step in the nursing/midwifery staffing model is establishment of the patient demand and care requirements. This data can be sourced from a range of sources including:

- the existing historical ‘last’ twelve-months of ExcelCare data which has been systematically collated and is representative of nursing and midwifery workload and patient acuity; and/ or
- the CPS intervention data sets;
- existing agreed staffing levels expressed in the Enterprise Agreement for ICU’s, ED’s, Operating Theatre complexes; and some other clinical areas.

This would provide a reliable and valid basis for determining nurse/midwife staffing on the basis of the international and national research conducted.

**Note:** NIMHPPD for these purposes includes direct care and indirect activity care hours (such as clinical handover, DDA checks, emergency trolley checks, equipment checks, ward rounds, documentation).

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### Environmental Factors eg:
- ExcelCare Ward Activity (Indirect) Timings
- CPS Care Environment Timings & Ward Survey
- ‘churn’ (Patient Turnover) – PAS

### Demand Metrics eg:
- N/MHPPD
- Clinical Specials
- Skill Mix
- ProAct / ExcelCare reports
- Patient Types / ARDRG data
- Excelcare/CPS timings

### Professional Judgement eg:
- Evidence-based Standards, Care Guides (ExcelCare & CPS)
- Shift by Shift Staffing Requirements Decision Tree
- Telford framework - collaborative decision making at unit level
Skill Mix (Currently ratio of RN/RM : EN)
Safe staffing requires the availability of the appropriate skill mix of staff to meet the needs of the patient population.

Evidence (such as that cited earlier) demonstrates that a higher proportion of Registered nurses improves patient outcomes. Currently the 2010 EA prescribes a level of skill mix RN/RM : EN required for inpatient wards.

However, the current system fails to deliver the required mix in all wards on all shifts. The 70:30 formula used in larger hospitals is distorted by averages. Hospitals use high proportions of RN/Ms in very acute/ high dependency areas to offset low skills mix at times in general wards. Even if the ward has a 70:30 mix available overall, the numbers available at particular times can be affected by the experience of the RN/M group (most may be in their first years’ of practice, be working away from their own clinical area, or be agency staff).

That is why the current 2010 EA requires consideration of the skills mix to be built from ward / unit level with consideration given to the mix of staff required on each shift, each day. Mix should contemplate the number of RNs/RM’s, EN’s and, where appropriate, AIN’s – but it must also contemplate the experience level of each category, along with any specialist practice requirements, to accurately build an appropriate mix of staff.

Professional Judgement Tool
Professional judgement in relation to staffing decision making has been given a bad name by previous misapplication of the practice. In the past, ‘professional judgement’ has been the excuse advanced by some managers defending decisions to staff at levels below the projected staffing generated by systems such as ExcelCare.

However professional judgement, explicit in the wide use of the ‘Telford’-type method, is the current foundation of nursing and midwifery workload planning. This model would require ward/unit managers to collaborate with their staff in determining how the resources available (from the metrics and environmental factors) can best be used to the advantage of effective patient care. This process is not unlike the process of hourly demand forecasting used in sites where ProAct is available but clearly, in this model, extends into the build of skills mix.

As discussed in this paper, ‘Telford’ (or any single tool) should not, however, be used as a stand-alone system. The Professional Judgement Tool ensures a consultative approach, and utilises the professional views of nurses / midwives to determine how many and what kind of staff are required to provide care within a clinical area.

Ward Environmental Factors
The model captures the literature supported environmental factors that impact on nursing / midwifery workload including ‘churn’ (patient turnover), geographical layout, equipment/ technology and administrative support. Work undertaken in SA during development of the CPS system provides evidence regarding the impact of these factors on workloads and a basis for negotiating time within the model.

Adjustability of Model
The ‘SA Nursing/Midwifery Safe Staffing Model’ must be able to be aligned to changes in patient population, models of care, new interventions and technology changes. Agreed adjustment triggers need to be developed.

Conclusion
Nurses and midwives represent 45% of the health care workforce and provide 24 / 7 care within a dynamic and complex environment.

Nurse / Midwife staffing levels do make a difference in patient outcomes (mortality and adverse events), patient experience, quality of care and the efficiency of care delivery.

Therefore, the need for a safe staffing nursing / midwifery model is critical to ensuring quality patient care and outcomes. The evidence shows that confidence in assessing nursing / midwifery staffing levels is best supported by utilising staffing methodologies that use two or more approaches.

South Australia has a wealth of experience in demand driven nursing/ midwifery models that have enabled safe patient care and are adjustable to the changing demands in patient needs, technology and patient types. Through ExcelCare and CPS, South Australia has a rich data set that is evidence-based and has been developed through wide consultation to inform the alternate staffing model for inpatient wards.

It is acknowledged that health care resources are scarce and must be used to optimise outcomes. This can best be achieved by using a collaborative approach to determine an outcome that enables safe staffing, staff satisfaction and improves health outcomes.

The bottom-line is that nurses and midwives must be involved in the journey of determining a safe staffing model if the model is to be successful.
Questions for consideration by ANMF (SA Branch) members

1. Principles used by ANMF (SA Branch) in evaluating possible staffing options include:
   - Transparency
   - Enforceability
   - Evidence-based
   - Empower teams to make decisions
   - Maintains relevance over time

   Are any of the above principles inappropriate?
   Are there additional principles we should using?

2. What do you see as positive aspects of the proposed ‘SA Nursing/Midwifery Safe Staffing Model’? (see pages 11-12)
   What are the negative aspects associated with the model?

3. Please rank (in order of importance 1 - 6) the things about staffing systems that are most critical to you:
   - Not losing staff numbers from current levels
   - Enforceability – being quick and easy
   - Transparency and simplicity of the system
   - Flexibility
   - Reflects day-to-day fluctuations in patients’ care needs
   - Other (please specify)

4. If simplicity and transparency are the most important factors to you, are you prepared to accept a model that would meet these criteria but could lead to lower staffing outcomes? (for example the ratios model in Victoria is simple to use and very transparent. However, some wards in SA are currently staffed at higher levels than they may be under that model.) Would such an outcome be acceptable and, if so, under what conditions?
5. The proposed ‘SA Nursing/Midwifery Safe Staffing Model’ limits the role professional judgement can play (see page 12) to allocation of the staffing resource over the day and day of the week. Do you agree that professional judgement should be limited in this way? What changes would you see as appropriate to the role of professional judgement in this model?

6. Do you agree with the suggestion that skills mix be ‘built’ at ward and unit level (see page 12) rather than a single formula covering whole hospitals?

If not, what would you suggest instead?

Do you agree with the suggestion that skills mix also consider relative experience, qualifications, familiarity with the unit and other factors rather than just the RN/EN classification grouping? If not, what alternatives would you suggest?

7. How important is agreement to a new model for safe staffing and skills mix in the 2013 Public Sector Enterprise Agreement?

- [ ] 1. The most important issue for EA negotiations
- [ ] 2. An important issue for EA negotiations
- [ ] 3. Somewhat important issue for EA negotiations
- [ ] 4. Not an important issue for EA negotiations
References:


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